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THE USE OF ERTS/LANDSAT IMAGERY IN RELATION TO AIRBORNE REMOTE SENSING FOR TERRAIN ANALYSIS IN WESTERN QUEENSLAND, AUSTRALIA

Report for period to 31st October 1975

by

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Receipt and handling of data to 31st October 1975

The following frames have been received:-

ID nos:-

2039-23555	Cloncurry - Mt. Isa area	(March Imagery)
2041-00013	Gregory R. - Mt. Isa area	(")
2039-23562	Cloncurry - Duchess area	(")
2041-00020	Mt. Isa - Urandangi area	(")
2038-23503	Julia Ck. - Mckinlay area	(")
2059-00012	Gregory R. - Mt. Isa area	(May Imagery)
2128-23501	Julia Creek area	(")

Plates for the interpretation of this imagery have been prepared but owing to involvement with field work in Australia for the acquisition of ground truth data only a limited amount of interpretation of the data was effected by 31st October 1975.

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Comment on the quality of the imagery

Apart from a noise band on three of the four bands of ID no. 2039-23555, the imagery is of good quality. Using the additive viewing system, on a quick look basis differences have been observed in the imagery taken at different seasons from LANDSAT 1 and LANDSAT 2. Precise interpretation will follow from the interpretation currently in progress.

Progress on the interpretation of the imagery

Ground truth information was obtained during the period April - September 1975, using existing interpretations of LANDSAT 1 imagery. The LANDSAT 2 imagery was not received in time for the field season.

Using the additive viewing system one colour composite transparency has been generated from the first LANDSAT 2 images for the following frames:-

ID no. 2039-23555 (Cloncurry - Dobbyn area)

Utilizing the above colour composite transparency part of the frame of the area of interest has been digitized by means of a microdensitometer. A supervised learning method, the maximum likelihood decision rule, has then been used to classify the image in an optimum manner. The next phase is to compare the results from this image with those from an image of the same area taken by

LANDSAT 1 some two years earlier, for evidence of changes. Progress has also been made in reading a CCT which we have obtained of South-East England displaying a selected portion of the image in a microfilm plotter both on a grey-scale and as a density-sliced image of a single wave-band. Since the above LANDSAT 2 image is satisfactory, application has been made for a CCT of the frame ID 2039-23555 of the Cloncurry - Dobbyn area of Western Queensland.